Inside Publishing:
How to resonate with your scientific community

Melissa Patterson, Ph.D.
Senior Journal Manager
October 22, 2014

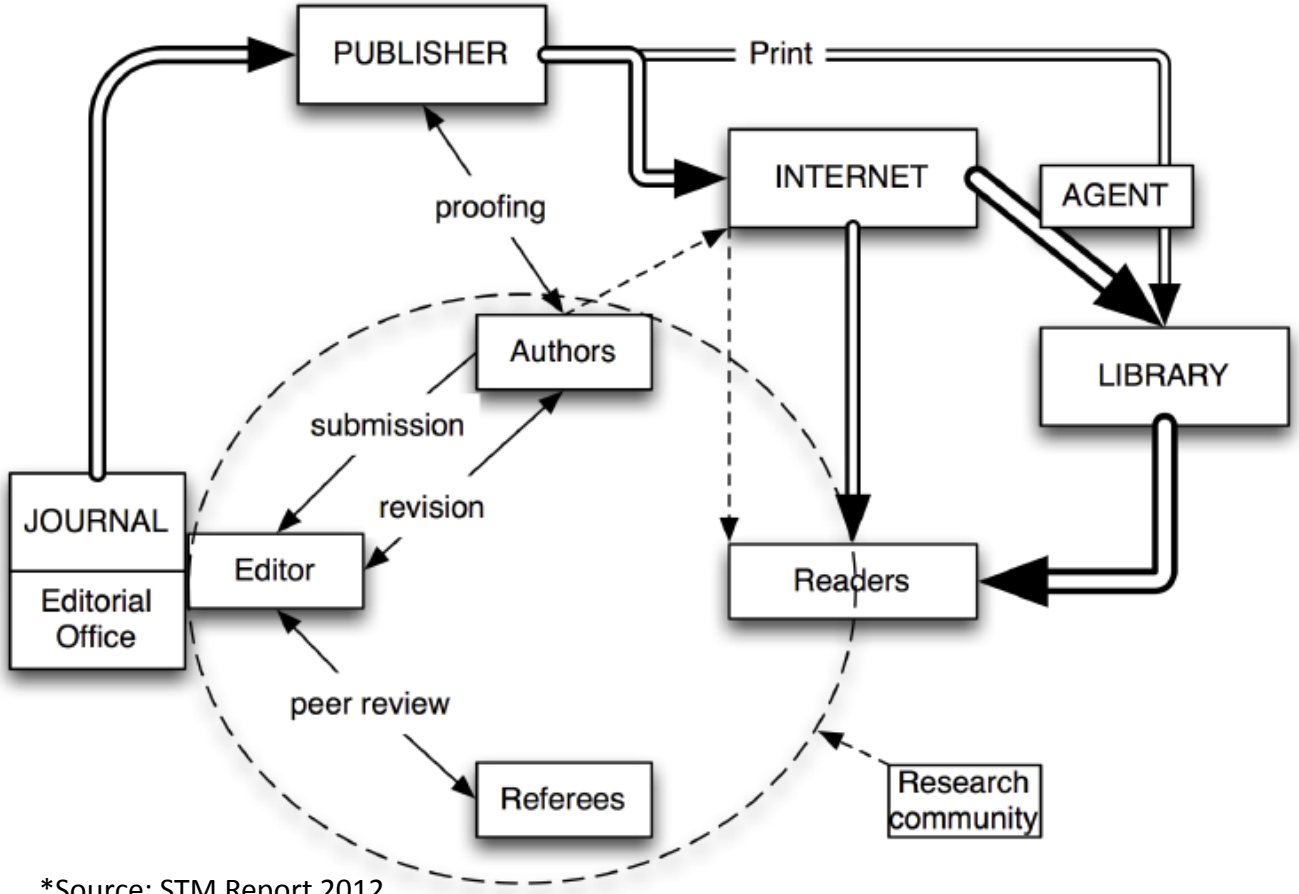
AIP Publishing

journals.aip.org

Where to publish and what to consider

- **The Publishing Cycle**
  - The Publisher
  - The Journal
    - What community do you want to reach?
    - What does your community find important?
    - Impact v. Impact Factor
- AIP Publishing
  - Who we are and what we offer
  - How we can help you reach your community
  - How to get published

The Publishing Cycle



*Source: STM Report 2012

The Journal

The journal has traditionally been seen to embody four functions:

Registration	Recording the authoritative date of receipt of the paper. Ownership of an idea.
Certification	Validation of work and quality control through peer review.
Dissemination	Communicating the findings to its intended audience usually via the brand identity of the journal.
Archival Record	Preserving a fixed version of the paper for future reference and citation. Long term preservation!

The importance of the Journal

com·mu·ni·ty
/kəˈmyo͞onədē/

noun

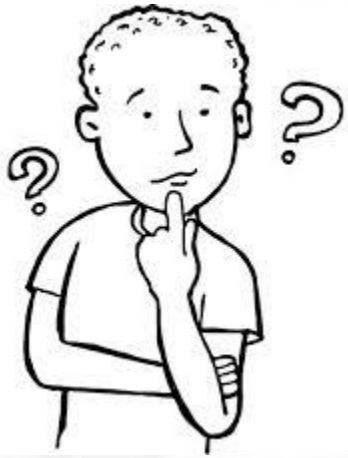
1. a group of people living in the same place or having a particular characteristic in common.
   "Rhode Island's Japanese community"
   synonyms: group, body, set, circle, clique, faction; More
2. a feeling of fellowship with others, as a result of sharing common attitudes, interests, and goals.
   "the sense of community that organized religion can provide"

Journal Selection: How do you choose where to publish?

Let's take a look at the Numbers…..

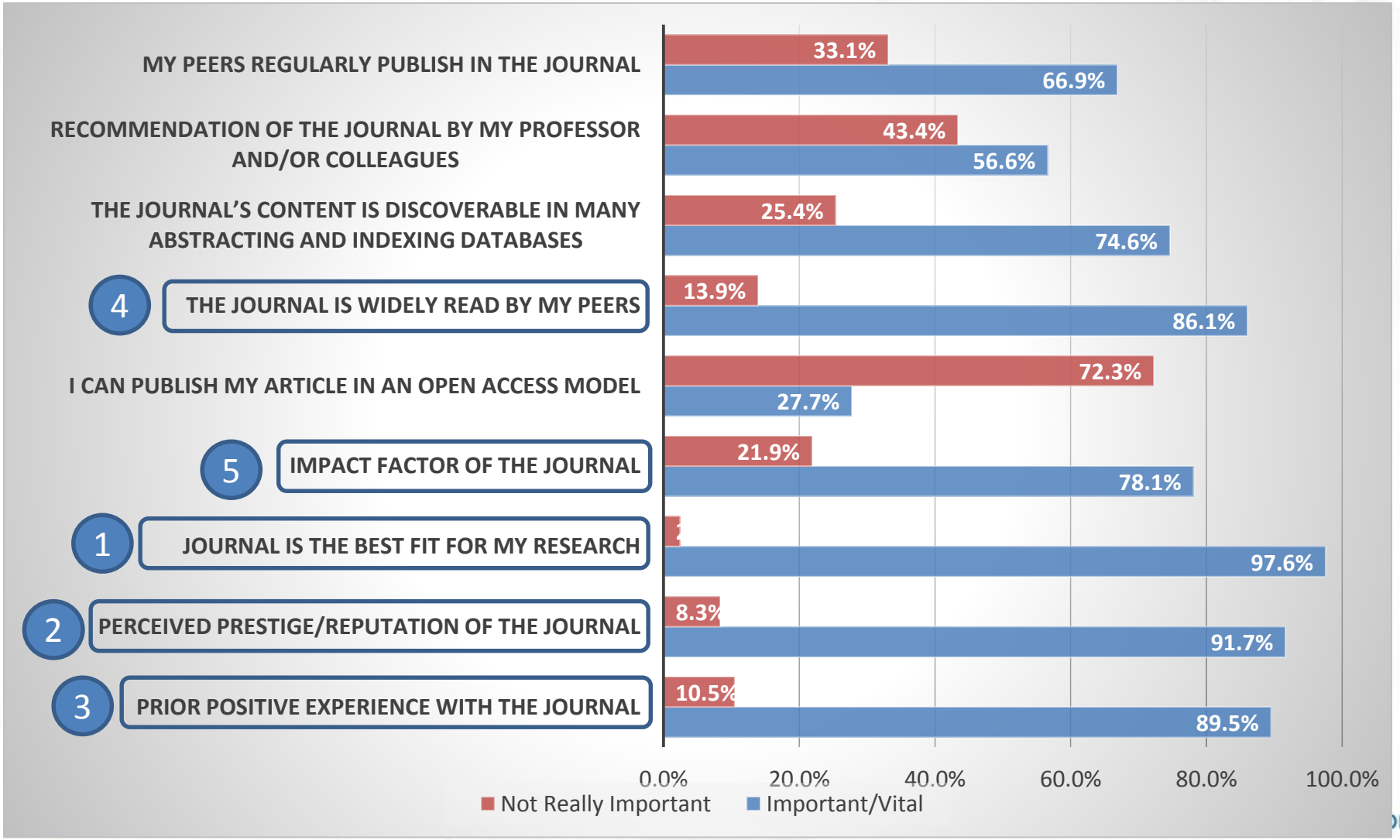
~ 26,000 Journals

- > 7,400 Journals in the Physical Sciences
- > 6,400 Journals in the Health Sciences
- > 7,600 Journals in the Social Sciences
- > 4,400 Journals in the Life Sciences



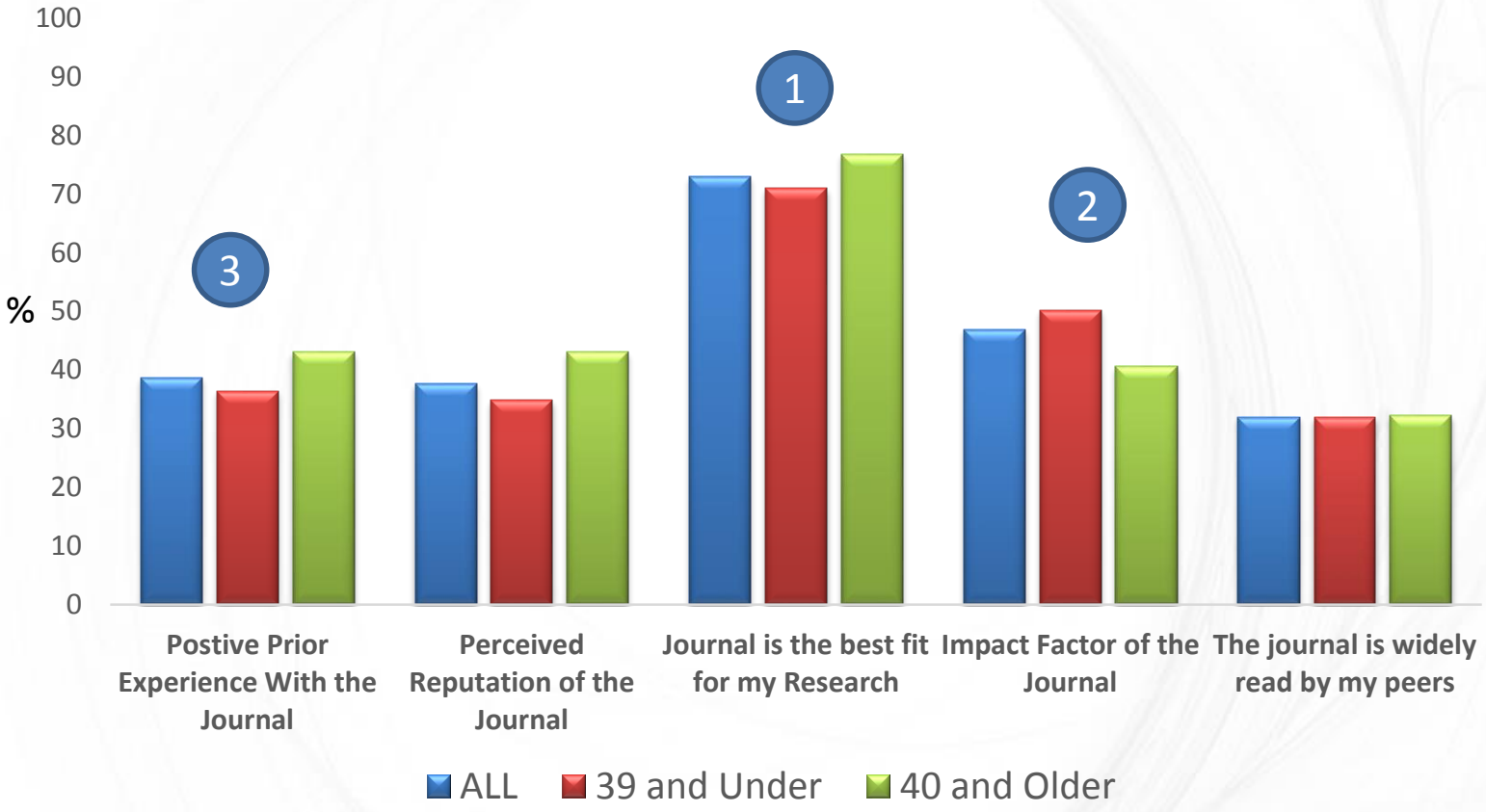
What does the community really think?

What do authors say they want from a journal..?



What does the community REALLY want?

When asked to select the top 3 factors from the list below which are the most important to you when deciding where to submit your research.

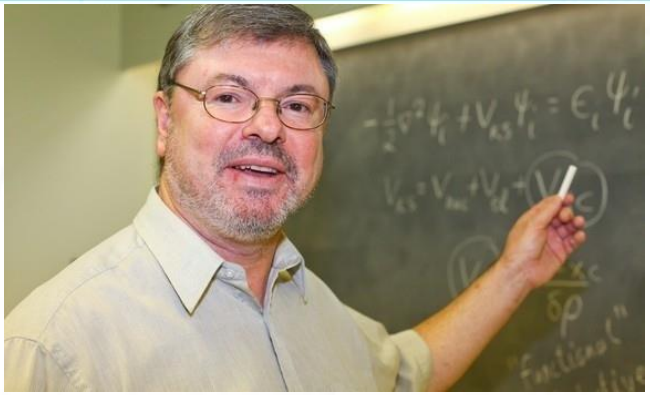


Journal Selection: Impact v. Impact Factor

- What can we say about the IF?
  - It is a metric we all know and love...
  - It's imperfect but…
    - We have to take it into consideration
      - Tenure
      - Potential jobs
      - Increased visibility to *certain* communities

But it isn't everything!

Journal Selection: IF v. Impact
A quick case study….



This is Axel Becke…

- JCP IF = 3.122
- Angewandte Chemie IF = 11.336

AIP | The Journal of Chemical Physics

Density-functional thermochemistry. III. The role of exact exchange

Axel D. Becke
Department of Chemistry, Queen's University, Kingston, Ontario, Canada K7L 3N6

(Received 30 October 1992; accepted 16 December 1992)

Despite the remarkable thermochemical accuracy of Kohn–Sham density-functional theories with gradient corrections for exchange-correlation [see, for example, A. D. Becke, J. Chem. Phys. **96**, 2155 (1992)], we believe that further improvements are unlikely unless *exact-exchange* information is considered. Arguments to support this view are presented, and a semiempirical exchange-correlation functional containing local-spin-density, gradient, and exact-exchange terms is tested on 56 atomization energies, 42 ionization potentials, 8 proton affinities, and 10 total atomic energies of first- and second-row systems. This functional performs significantly better than previous functionals with gradient corrections only,

46,184 citations

I. INT … ıe uniform … ıalism, on

of density-functional theory (DFT) on the atoms and molecules of the Gaussian-1 (G1) database of Pople and coworkers.[1,2] In the first paper,[3] hereafter referred to as paper I, we demonstrated that the well-known overbinding tendency of the local-spin-density exchange-correlation approximation (LSDA) is nicely compensated by the exchange-only density-gradient correction of Becke.[4] Our second paper[5] (paper II) indicated that the exchange-only gradient correction by itself gives extremely poor ionization potentials, and must be accompanied by a gradient correction for *dynamical correlation* if a generally reliable thermochemical procedure is desired. For this purpose, we adopted the gradient-corrected correlation functional of Perdew and Wang.[6]

which this work is based, was presented in paper I and will not be repeated here. Excellent expositions of density-functional theory in general are also available elsewhere.[9] Instead, we begin the following section with a discussion of the adiabatic connection formula[7] and its physical content. The most important implication of this discussion is the undeniable role of exact exchange. Despite the well-intentioned efforts of density-functional researchers to circumvent the calculation of exact-exchange energies, we shall see that a small exact-exchange component is a natural and necessary constituent of any exchange-correlation approximation aiming for accurate molecular energetics.

Angewandte International Edition Chemie | 125 Years Angewandte Chemie | GDCh A Journal of the Gesellschaft Deutscher Chemiker

COMMUNICATIONS

Communications may be submitted in English *or* in German. Further details regarding the submission of communications can be found in the "Notice to Authors" reproduced in the January issue of the journal. Copies thereof may be obtained from the editorial office upon request.

353 citations

and H. G. von Schnering

Ubiquitous chemical terms such as "the electron pair" and "the chemical bond" do not correspond unambiguously to directly measurable physical quantities. Because of their undeniable conceptual utility, however, clear and rigorous physical definitions are essential. The chemical bond is often described by localized molecular orbitals (see for example ref. [1]), but localized orbital sets are not unique. For example, two possibilities for bond localization of the π orbitals in benzene are shown in **1** and **2**, yet other, indeed infinitely many, mathematically equivalent schemes are also possible.[2] The localized molecular orbital description of chemical bonding is physically and mathematically arbitrary.

two-particle density for electrons of parallel spin, a function of two electrons' coordinates (x, y, z and x', y', z') which gives the joint probability of finding one electron at position x, y, z and another electron of the same spin at position x', y', z'. The analysis showed that electrons of parallel spin restrict themselves to separate regions of space, and hence follows the notion of localized electron pairs. A well-known application of these concepts are the *Gillespie* and *Nyholm* rules.[5]

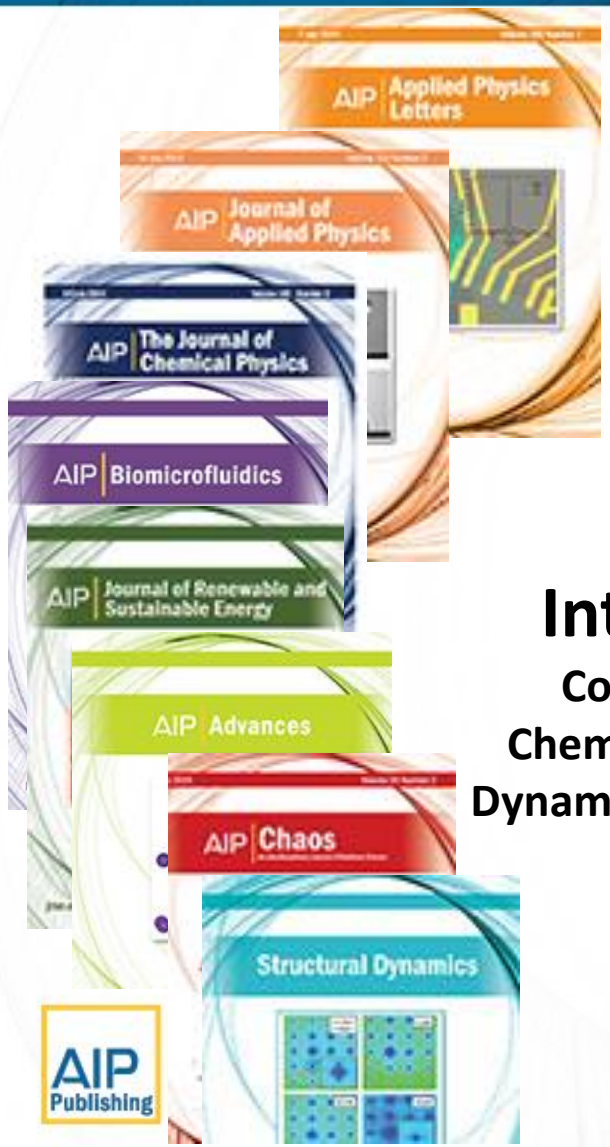
Becke and *Edgecombe* investigated another way of defin- … swise made … behavior at … that the … pin close to … to regions … probabil- … alized". As a measure of this, *Becke* and *Edgecombe* introduced the Electron Localization Function (ELF), defined so as to have the convenient range of values $0 \le \mathrm{ELF} \le 1$. Regions in which the value of ELF is close to 1 correspond to well-localized electrons, and may be identified with atomic shells, chemical bonds and lone electron pairs. It is remarkable that the behavior of only the parallel-spin electrons so clearly discerns these details. The nature of electron pair correlation for opposite spins will not be considered here.

Technical details: Let us consider two electrons with parallel spins at positions x, y, z and x', y', z' (with separation r_{12}). The two-particle density is a function of both x, y, z and x', y', z'. Upon averaging over a sphere centered on x, y, z, one obtains a function of x, y, z and r_{12}, whose power series in r_{12} has the leading term $D(x,y,z)r_{12}^2$. The definition of ELF is then given by equation (a), where $D(x,y,z)$ is the value of D for a homogeneous electron gas with

Journal Selection: It's not easy!

- **Questions you should ask yourself…**
  - **Is this journal widely read by my peers?**
  - **Is the Journal the best fit for my research**
    - Visit the journal homepage, assess their focus and coverage
    - Peruse abstracts of recent publications
  - **Reputation of the Publisher and Journal**
  - **Experience publishing with the Journal**

AIP Publishing: Best fit for your community



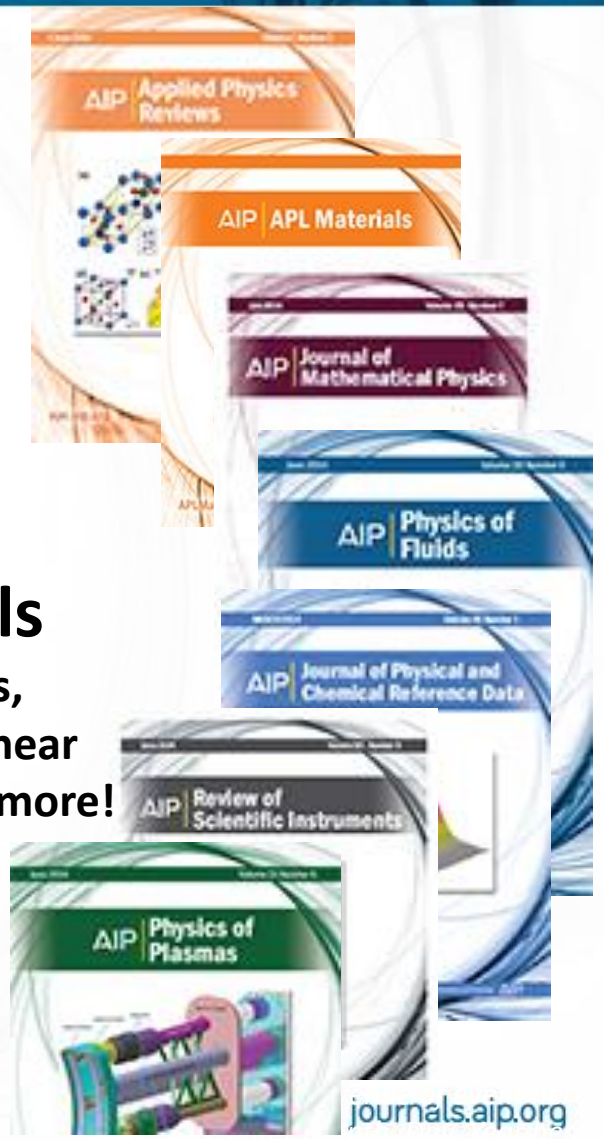
15 Journals

Physical Sciences at the Core

Interdisciplinary Journals

Covering Instrumentation, Materials, Chemistry, Energy, Biology, and Non-linear Dynamics, International Standards, and more!

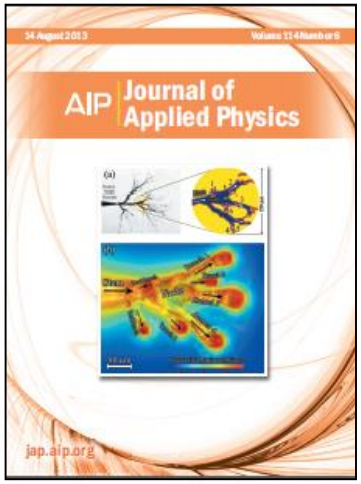
Open Access options



Our Journals:
Flagship Publications

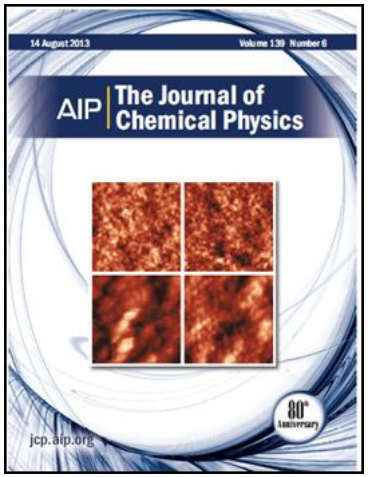
AIP Publishing's three Flagship Journals represent the historical core strengths of AIP, over 80 years of top quality publications

Launched: 1931



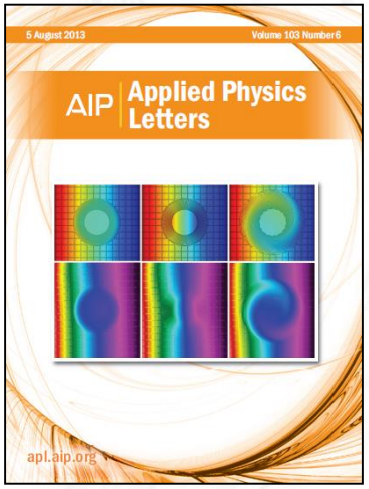
136,103 Cites
Applied Physics

Launched: 1933



188,038 Cites
Atomic, Molecular, and Chemical Physics

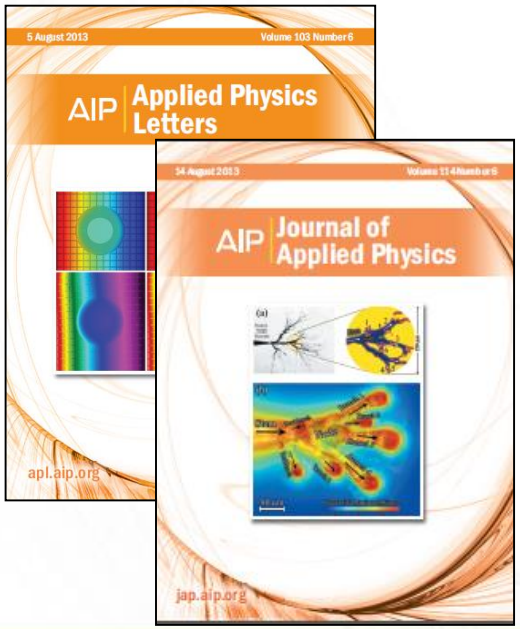
Launched: 1962

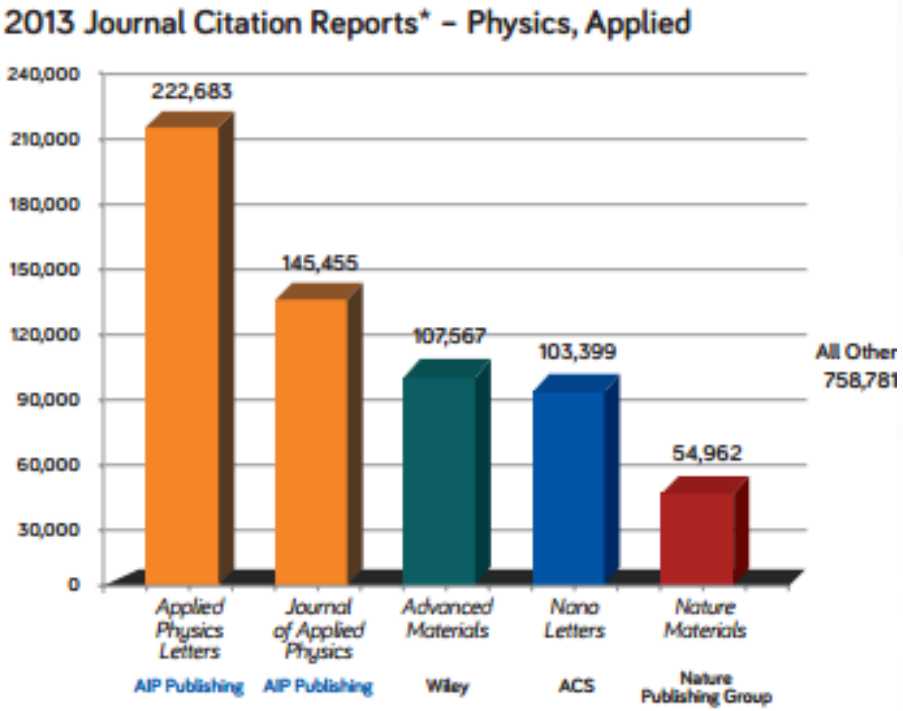


212,433 Cites
Applied Physics

Our Journals:
Most cited in physical sciences categories

- **#1** and **#2** - APL and JAP are the most cited journals in Applied Physics
- One out of four citations in this category are to APL and JAP

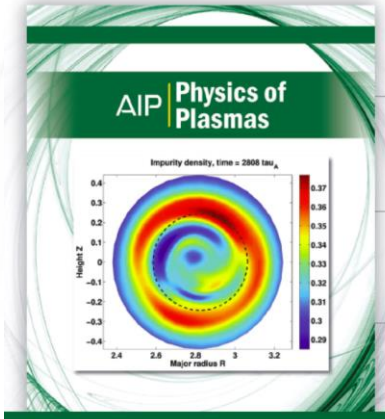




AIP Publishing

Our Journals: Topical Strength

Specialized Journals in Physics

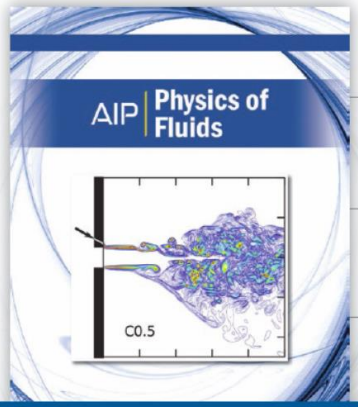


2013 Impact Factor: **2.249**

2013 Total Citations: **22,152**

2013 Total Articles: **1,106**

#1 Journal in Google Scholar Metrics for the Plasma & Fusion Category

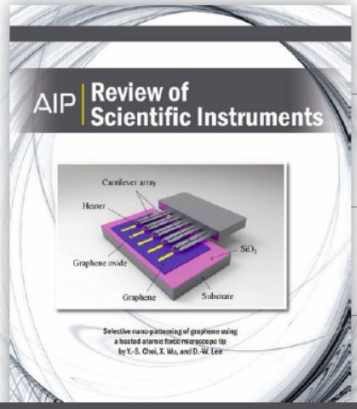


2013 Impact Factor: **2.04**

2013 Total Citations: **22,399**

5 Year Impact Factor **2.208**

A highly cited leader in Mechanics and Fluid Physics

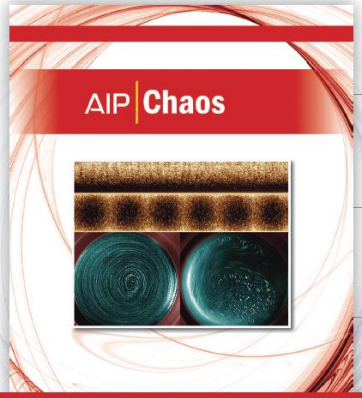


2013 Impact Factor: **1.584**

2013 Total Citations: **24,499**

2013 Total Articles: **969**

An indispensable resource for researchers interested in instrumentatio

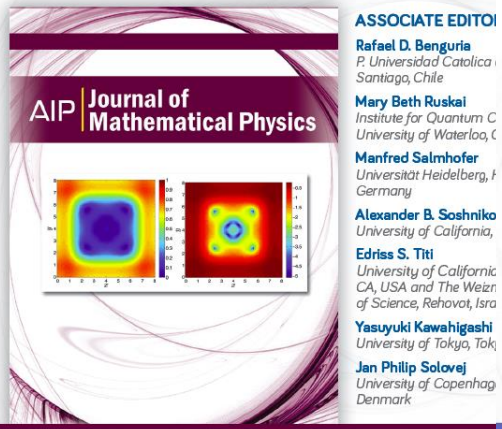


2013 Impact Factor: **1.761**

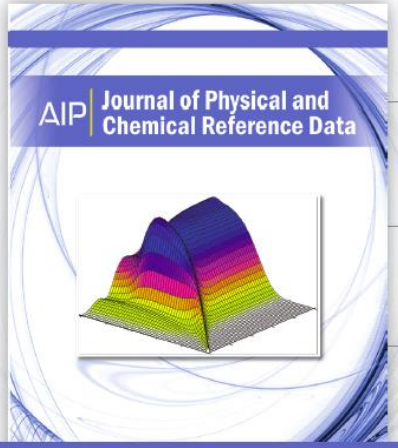
2013 Total Citations: **4,602**

2013 Total Articles: **189**

An interdisciplinary journal in nonlinear sciences *Chaos* will publish 12 monthly online issues (collated in 4 quarterly print issues) in 2015.



One of the most highly cited journals in Mathematical Physic



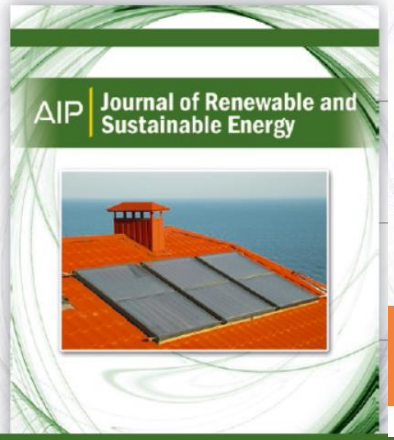
2013 Impact Factor: **3.108**

2013 Total Citations: **5,474**

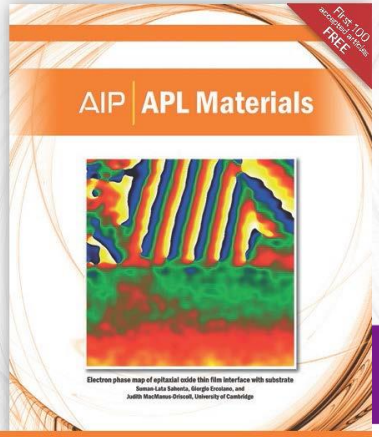
2013 Total Articles: **14**

The authoritative resource for critically evaluated reference data for physical sciences and engineeri

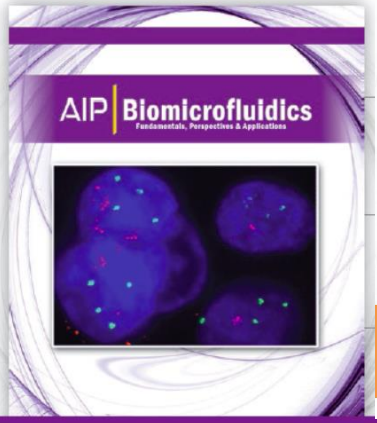
Our Journals: Branching Out



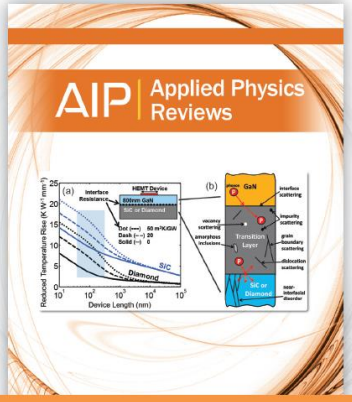
An emerging leader in renewable and sustainable energy



Timely publication of the best original research in functional materials science



An emerging leader in micro- and nanofluidics at the interface of physics, chemistry, and biology



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Our Open Access Journals

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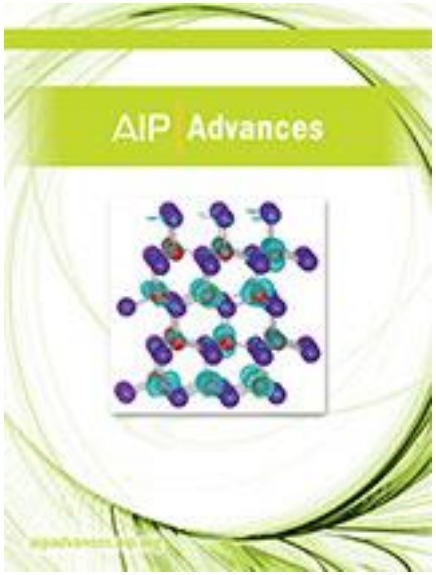
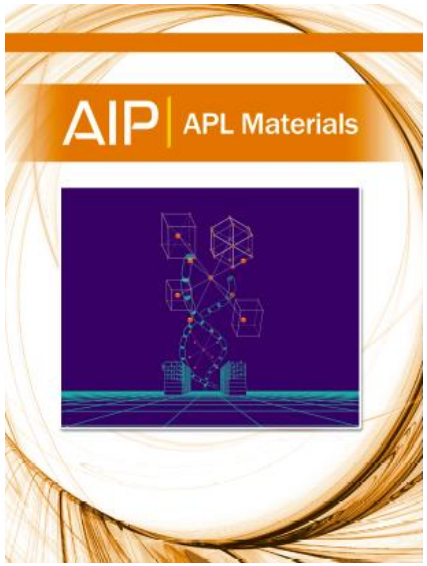
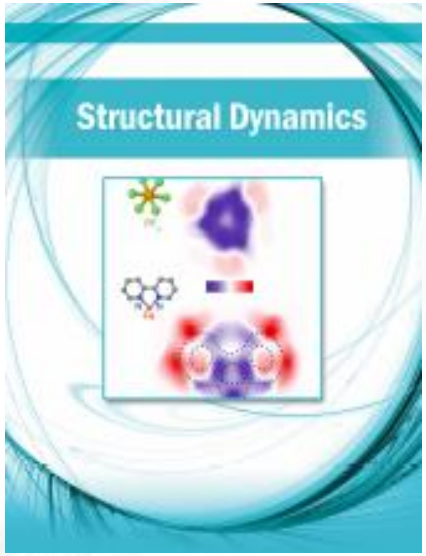


Launched: 2013



Launched: 2013



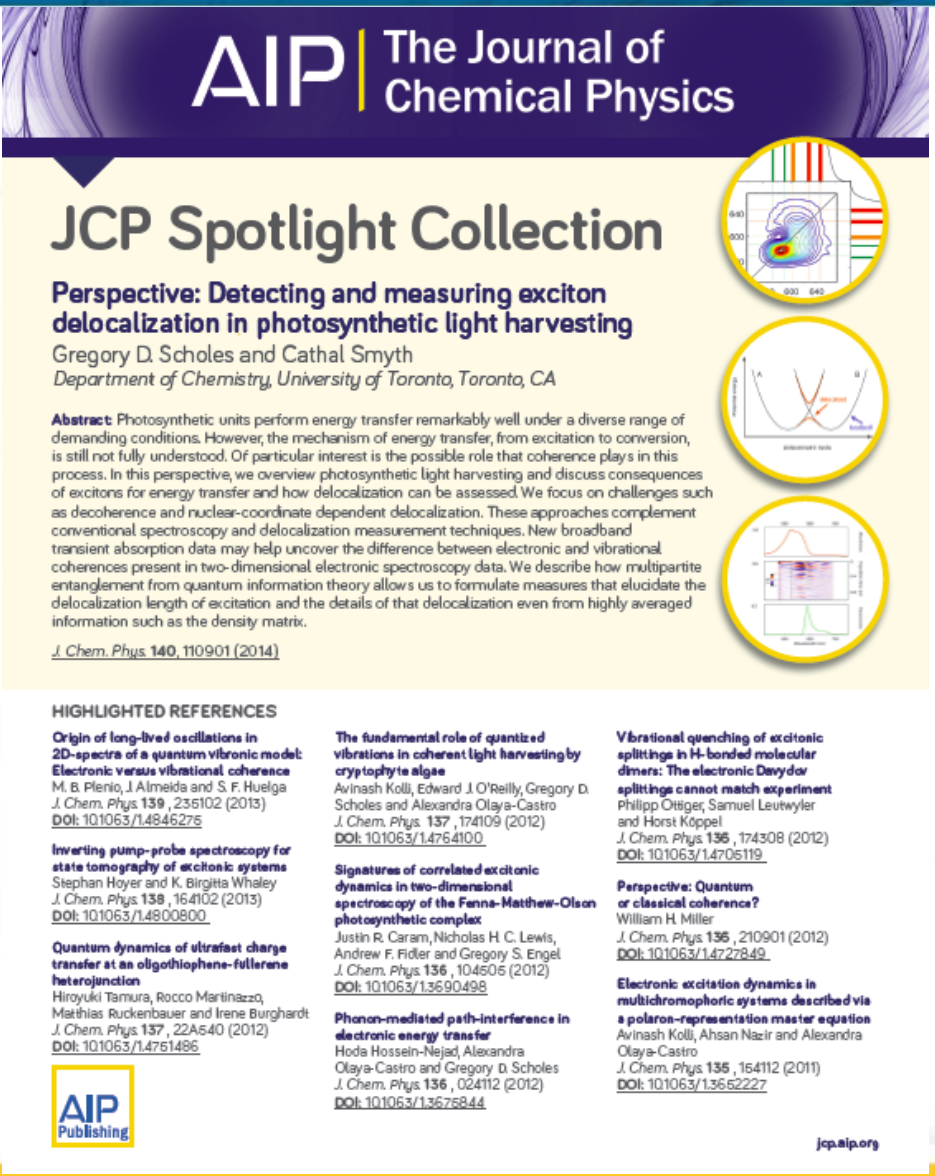
Publishing with our Journals

- **ARTICLE TYPES:**
  - Letters
  - Rapid Communications
  - Original Full Length Articles
  - Reviews
  - Tutorials

- **SPECIAL CONTENT:**
  - Perspectives
  - Focus Review Articles
  - Special Topic Articles
  - Fast Track

Special Content: Fast Track Articles

Special Content: Perspective Articles



AIP | The Journal of Chemical Physics

JCP Spotlight Collection

Perspective: Detecting and measuring exciton delocalization in photosynthetic light harvesting

Gregory D. Scholes and Cathal Smyth

Department of Chemistry, University of Toronto, Toronto, CA

Abstract: Photosynthetic units perform energy transfer remarkably well under a diverse range of demanding conditions. However, the mechanism of energy transfer, from excitation to conversion, is still not fully understood. Of particular interest is the possible role that coherence plays in this process. In this perspective, we overview photosynthetic light harvesting and discuss consequences of excitons for energy transfer and how delocalization can be assessed. We focus on challenges such as decoherence and nuclear-coordinate dependent delocalization. These approaches complement conventional spectroscopy and delocalization measurement techniques. New broadband transient absorption data may help uncover the difference between electronic and vibrational coherences present in two-dimensional electronic spectroscopy data. We describe how multipartite entanglement from quantum information theory allows us to formulate measures that elucidate the delocalization length of excitation and the details of that delocalization even from highly averaged information such as the density matrix.

J. Chem. Phys. **140**, 110901 (2014)

HIGHLIGHTED REFERENCES

Origin of long-lived oscillations in 2D-spectra of a quantum vibronic model: Electronic versus vibrational coherence
M. B. Plenio, J. Almeida and S. F. Huelga
J. Chem. Phys. **139**, 235102 (2013)
DOI: 10.1063/1.4846275

Inverting pump-probe spectroscopy for state tomography of excitonic systems
Stephan Hoyer and K. Birgitta Whaley
J. Chem. Phys. **138**, 164102 (2013)
DOI: 10.1063/1.4800800

Quantum dynamics of ultrafast charge transfer at an oligothiophene-fullerene heterojunction
Hiroyuki Tamura, Rocco Martinazzo, Matthias Ruckenbauer and Irene Burghardt
J. Chem. Phys. **137**, 22A540 (2012)
DOI: 10.1063/1.4751486

The fundamental role of quantized vibrations in coherent light harvesting by cryptophyte algae
Avinash Kolli, Edward J. O'Reilly, Gregory D. Scholes and Alexandra Olaya-Castro
J. Chem. Phys. **137**, 174109 (2012)
DOI: 10.1063/1.4764100

Signatures of correlated excitonic dynamics in two-dimensional spectroscopy of the Fenna-Matthew-Olson photosynthetic complex
Justin R. Caram, Nicholas H. C. Lewis, Andrew F. Fidler and Gregory S. Engel
J. Chem. Phys. **136**, 104505 (2012)
DOI: 10.1063/1.3690498

Phonon-mediated path-interference in electronic energy transfer
Hoda Hossein-Nejad, Alexandra Olaya-Castro and Gregory D. Scholes
J. Chem. Phys. **136**, 024112 (2012)
DOI: 10.1063/1.3675844

Vibrational quenching of excitonic splittings in H-bonded molecular dimers: The electronic Davydov splittings cannot match experiment
Philipp Ottiger, Samuel Leutwyler and Horst Köppel
J. Chem. Phys. **136**, 174308 (2012)
DOI: 10.1063/1.4705119

Perspective: Quantum or classical coherence?
William H. Miller
J. Chem. Phys. **136**, 210901 (2012)
DOI: 10.1063/1.4727849

Electronic excitation dynamics in multichromophoric systems described via a polaron-representation master equation
Avinash Kolli, Ahsan Nazir and Alexandra Olaya-Castro
J. Chem. Phys. **135**, 154112 (2011)
DOI: 10.1063/1.3652227

AIP Publishing

jcp.aip.org

- **Spotlight Collections**
  - Forward looking Perspective articles
  - Topics that are generating a great deal of interest in the chemical physics community
  - Articles are always among the most downloaded and the most cited

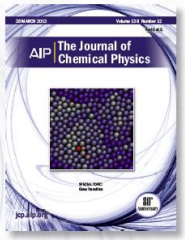
Special Content: Special Topics

AIP | The Journal of Chemical Physics

Special Topic on the Glass Transition

This Special Topic presents a timely discussion of modern developments in our understanding of the behavior of supercooled liquids and amorphous materials. In spite of decades of intense theoretical and experimental study, the fundamental causes of vitrification are still debated. Further, a deeper understanding of the behavior of supercooled liquids and glasses will have implications in diverse fields ranging from biology (e.g., the passive transport of cellular cargo which occurs in a dense, disordered environment) to materials science (e.g., the design of amorphous materials with unique mechanical properties). We thus believe that the Special Topic on the Glass Transition will be instrumental in focusing attention on this important problem.

The Journal of Chemical Physics has made the articles in the Special Topic on the Glass Transition *FREELY AVAILABLE* for 30 days beginning on July 21, 2013. Click here to visit the section online and access these important articles!

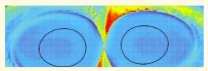


AIP | Physics of Plasmas

Space and Astrophysical Plasmas

This short compendium of papers on space and astrophysical plasmas published in ***Physics of Plasmas*** during 2012 - 2014 provides a broad range of examples of compelling scientific advances made in this important subfield during the past several years. The selection of papers included here covers diverse topics ranging from magnetic reconnection, to kinetic effects in accretion disc plasmas, to freak waves in white dwarfs and magnetars, to identification of potential mechanism for breaks in the cosmic ray spectrum, to dust-driven currents in the magnetosphere of Saturn, to mention a few examples.

— Ronald C. Davidson, Editor-in-Chief, *Physics of Plasmas*



SPECIAL TOPIC SECTION:
Advances in magnetic reconnection research in space and laboratory plasmas
Guest Editors: *Hantao Ji, Yasushi Ono and Ryoji Matsumoto*
Physics of Plasmas, June 2013

The transfer between electron bulk kinetic energy and thermal energy in collisionless magnetic reconnection
San Lu, Quanming Lu, Can Huang and Shui Wang
Phys. Plasmas **20**, 061203 (2013)
DOI: 10.1063/1.4811119

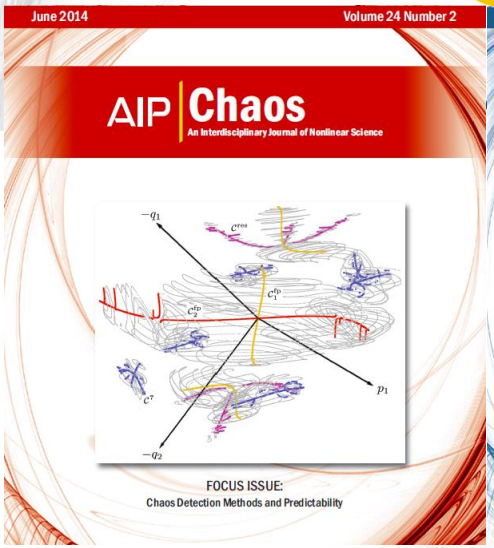
The influence of intense electric fields on three-dimensional asymmetric magnetic reconnection
P. L. Pritchett
Phys. Plasmas **20**, 061204 (2013)
DOI: 10.1063/1.4811123

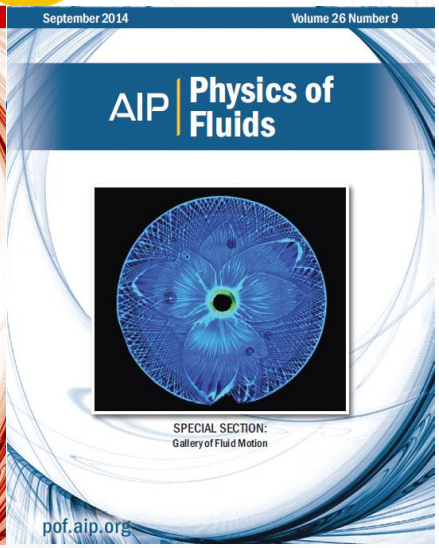
Excitation and propagation of electromagnetic fluctuations with ion-cyclotron range of frequency in magnetic reconnection laboratory experiment
Michiaki Inomoto, Akihiro Kuwahata, Hiroshi Tanabe, Yasushi Ono and TS Group
Phys. Plasmas **20**, 061209 (2013)
DOI: 10.1063/1.4811469

Aspects of collisionless magnetic reconnection in asymmetric systems
Michael Hesse, Nicolas Aunai, Seiji Zenitani, Masha Kuznetsova and Joachim Birn

2014 Special Topics

AIP | APL Materials





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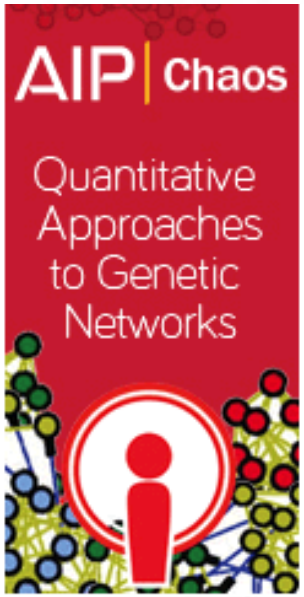
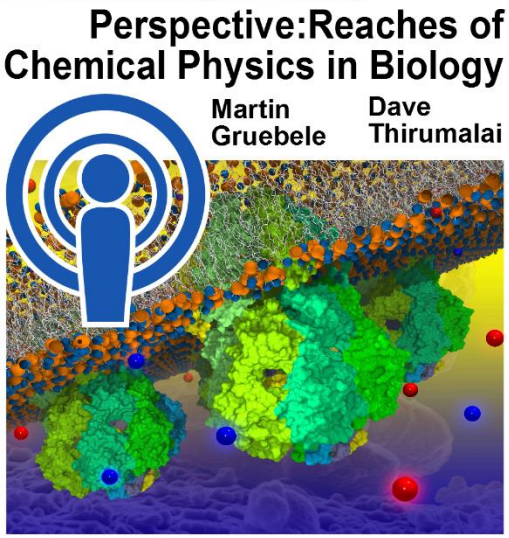
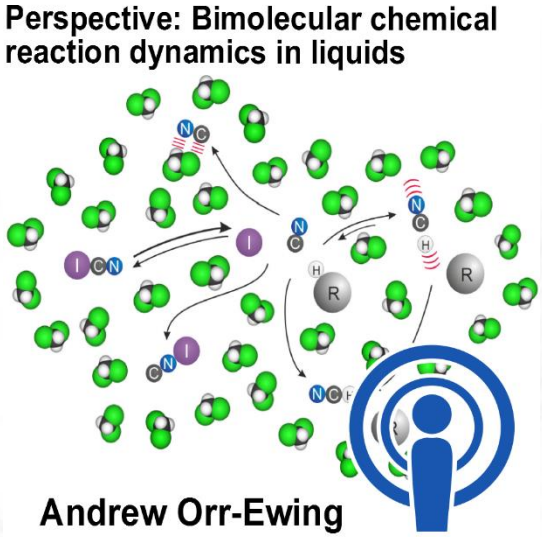
Added Value: Author Podcast Interviews







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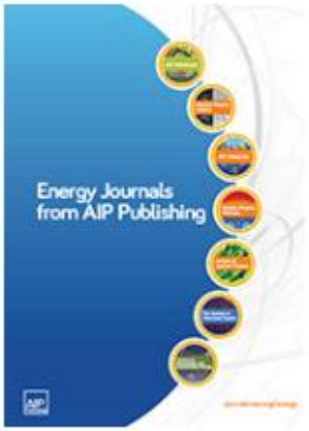
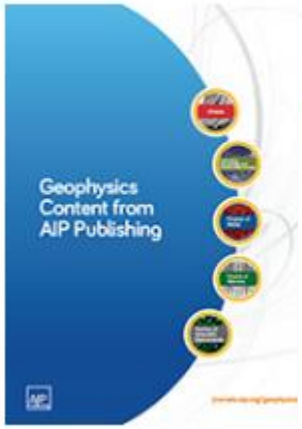
Added Value: Topical Collections

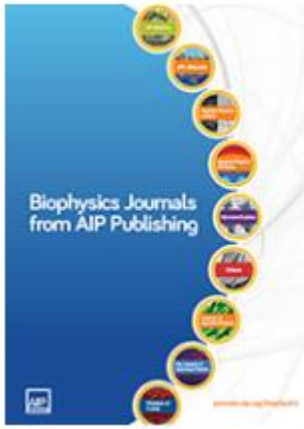
Energy Portfolio



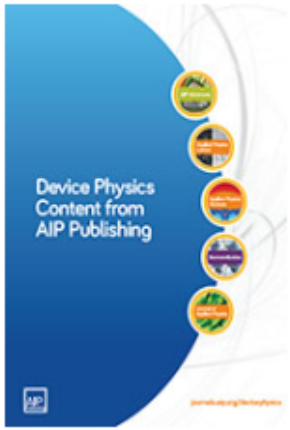
Geophysics Portfolio



Biophysics Portfolio



Device Physics Portfolio

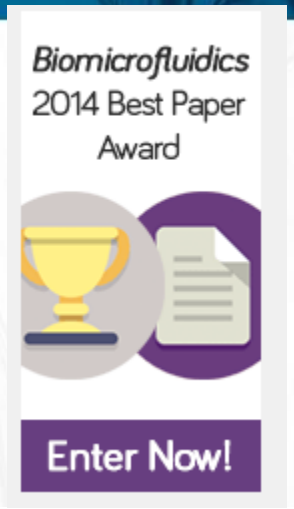


Added Value: AIP Publishing Sponsored Awards

- **Biomicrofluidics Best Paper Award**
  - Award recognizes significant contributions by emerging authors in microfluidics and nanofluidics

- **François Naftali Frenkiel Award for Fluid Mechanics**
  - Sponsored by Physics of Fluids
  - Award recognizes significant contributions in fluid mechanics by young investigators.

- **Earle K. Plyler Prize for Molecular Spectroscopy & Dynamics**
  - Sponsored by The Journal of Chemical Physics
  - recognize and encourage notable contributions to the field of molecular spectroscopy and dynamics.



Call for Nominations: JCP Sponsored 2015 Plyler Prize

The Earl K. Plyler Prize for Molecular Spectroscopy and Dynamics is awarded every year by the American Physical Society to recognize and encourage notable contributions to th field. *The Journal of Chemical Physics* proudly sponsors the Plyler Prize and would like to call on the chemical physics community to nominate qualified scientists for this award. The deadline for submission of nominations is July 1, 2014. For more information on the nomination and selection process see the APS website.

Below are some publications from previous Plyler Prize winners. These articles will be freely available for a limited time.

journals.aip.org

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Final thoughts…

- Know your Publisher
- Understand the community you want to reach and research your journal
- Take into consideration what your community finds important, what you find important, what you use and read as a researcher
- AIP Publishing
  - Long rich history in the physical sciences
    - From broad journals to topical journals to niche journals
    - We add value…because we value your work
    - Come and join our COMMUNITY!


תודה
Dankie
Gracias
Спасибо
شكراً
Merci
Takk
Köszönjük
Terima kasih
Grazie
Dziękujemy
Dėkojame
Ďakujeme
Vielen Dank
Paldies
Kiitos
Täname teid
谢谢
Thank You
Tak
感謝您
Obrigado
Teşekkür Ederiz
감사합니다
Σας Ευχαριστούμ
ขอบคุณ
Bedankt
Děkujeme vám
ありがとうございます
Tack